

Subject: glowbugs V1 #225

glowbugs

Saturday, January 17 1998

Volume 01 : Number 225

Date: Fri, 16 Jan 1998 14:02:51 -0500 (EST)

From: rdkeys@csemail.cropsci.ncsu.edu

Subject: Anyone on the air this weekend?

Well, it looks like we gonna gets a longish weekend around 'ere, so lets us see ye all aboard for a fine winter's watch till the wee small hours on the ol' BA/GB QRG 3579R545/1802R500 QTR anytime after dark (me, I like da later 0500Z hours cuz the band it be quieter and the dx be better out ta da right coast from da left coast.

Sees ya dere.....

73/ZUT DE NA4G/Bob UP

Date: Fri, 16 Jan 1998 12:56:19 EST

From: EWoodman <EWoodman@aol.com>

Subject: Pulse Duration Modulation?

Does anyone happen to have any info/schematics on PDM as it would apply to an AM tube type transmitter? I heard one on 160M the other day and it sounded really nice. Unfortunately I wasn't able to get set up on 160 in time to ask him about it.

I've been told the basics on it but would like some practical information. The fact that it doesn't require a modulation transformer makes it quite interesting.

Any help would be greatly appreciated.

Eric KA1YRV

Date: Fri, 16 Jan 1998 15:41:49 -0500 (EST)

From: leel@digital.net

Subject: need info

Hi Gang

I receintly got a heathkit grid dip osc..

However no book,

it is a model 1250. Would appreciate anybody that can send me some info on it.

thanks 73 73 73

Date: Fri, 16 Jan 1998 16:10:49 -0600

From: mack@mails.imed.com (Ray Mack)
Subject: Re: Pulse Duration Modulation?

Eric:

I presume that you are talking about a mechanism much like what is used in a lot of stereo audio amplifiers these days. What you are describing is basically a DC-DC (switch mode power supply) converter that puts out a DC voltage that follows the audio of your voice.

If, for instance, your DX-60 has 400V as quiescent Plate voltage, this is the voltage the DC-DC would put out at rest. The regulator would simply increase or decrease the output voltage to correspond to the audio of your voice.

It would not be especially difficult to do this circuit. A boost circuit could use the nominal plate voltage to generate both the positive and negative portions using a SMPS chip, a *big* MOSFET, a *big* inductor (by SMPS standards), and a moderate electrolytic cap. This is basically the same as the horizontal output section of a TV set. You just hook your audio signal into the error amplifier pin of the regulator IC and you get a voltage that follows your audio. It might be problematic getting full 100% negative modulation though. More than 100% positive modulation is possible, though

An even easier circuit is to use a buck regulator from V_p that is twice the quiescent V_p . A pulse width of 50% gives no signal and the output again follows the audio. This topology allows 100% modulation in both directions and no more.

Does anyone have a website or FTP site for scanned schematics or postscript schematics?

Ray Mack
WD5IFS
mack@mails.imed.com

Reply Separator

Subject: Pulse Duration Modulation?

Author: EWoodman <EWoodman@aol.com> at mails
Date: 1/16/98 12:56 PM

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Any help would be greatly appreciated.

Eric K1YRV

Date: Sat, 17 Jan 1998 11:25:22 +1000
From: Murray Kelly <mkelly@powerup.com.au>
Subject: Re: Pulse Duration Modulation?

Would that be like the QST article a while back on a 'class E'
40m trx described over a couple of months? It looked very compact
for the full kW (from memory).

EWoodman wrote:

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* Murray Kelly vk4aok mkelly@powerup.com.au *
* 29 Molonga Ter. / Graceville/ QLD. 4075/ Australia *
* ph/fax Intl+ 61 7 3379 3307 *

Date: Sat, 17 Jan 1998 17:18:40 EST
From: nels@juno.com (Larry Szendrei)
Subject: Re: Pulse Duration Modulation?

Yep, sure do.

I sent the info to Bry on this list, who said he'd make it available on
the net. Bry, any progress in that area? If not, I can send it to you,
Eric. Email me your (snail mail) address. The pulse circuitry is hard to
do with tubes, except for the final switch. Mine is solid state except
for this and the final RF class C stage, which is also hollow state.

It wasn't me that you heard, was it? There's not too many of us around
running PDM AM transmitters. The only folks I'm aware of (besides myself)
are WA1GFZ and KA1SI (who may have traded his call for his old WA1
call... I forget the suffix).

Larry NE1S

On Fri, 16 Jan 1998 12:56:19 EST EWoodman <EWoodman@aol.com> writes:
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End of glowbugs V1 #225
